June 2003

News and Views

Material witness: Patent pending

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doi:10.1038/nmat910

Patents, it is widely believed, exist to protect the individual inventor and to foster the process of research and discovery by ensuring that it carries just rewards. Well, that is not a laughable claim, but neither does it fit too comfortably with the common realities of industrial patent procedure.

There has seldom been a better time to take a careful look at what is entailed in, and implied by, the process of gaining a patent. For there is increasing talk of eliminating problems in the expensive and intricate business of obtaining international patent protection by unifying global patent law in a single, worldwide treaty.

At present, global patenting necessitates filing applications with each of the many national or regional patent offices that exist — for example, in the USA, Japan and Europe. This is a protracted process for which administrative and legal costs can be astronomical, beyond the means of a small company.

But it is worse than that, because the United States grants patents on a different basis from the rest of the world. Whereas everyone else gives precedence to the first person or company to file a valid patent application, in the USA precedence is established by demonstrating, in a complicated legal process, priority of invention — for example, by inspection of laboratory notebooks.

Advocates of the US system say that it is fairer and helps to prevent blanket filing of tenuous claims by big companies. 'First-to-file', on the other hand, represents an unambiguous ground rule that does not depend on the vicissitudes of legal wrangling.

The truth is that the US 'first-to-invent' process, far from imposing tougher criteria on patents, in practice allows for a much looser definition of what is patentable, often including ideas and procedures that have rather little technological content. Harmonization of global patenting would require not only that the USA give up this long-standing difference with the rest of the world, but also that there be greater consensus on what patents may and may not cover.

But such a debate would also have to relinquish the pretence — dear to America's edisonian tradition — that patents protect the 'little guy'. Even in the 1950s, the applied mathematician Norbert Wiener pointed out that, in a legal system lacking any technological competence, proof of 'first-to-invent' was largely a matter of who could afford the best lawyers and expert witnesses. "The pressure of power, riches, and the

ability to use these for the employment of the best legal talent is almost certain to dominate the final decision", he said.

Wiener's gorgeous little book *Invention* (MIT Press, 1993) should be required reading for this debate (as well as for any study of applied science). "The law as to what an invention is should take a real cognisance of what the art of invention is, and of how inventions are actually made", said Wiener. This is something we still do not understand, or teach, very well. Unless that changes, the main beneficiaries of patents will continue to be lawyers.